

(Batch)

1641

10-17-99

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/355,793

DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

ENTERED

```
1 <110> APPLICANT: Blaser, Martin
2 Thompson, Stuart A.
3 Dworkin, Joel
4 <120> TITLE OF INVENTION: Method of Delivering Antigens for Vaccination
5 with a Live Vector
6 <130> FILE REFERENCE: D5979
7 <140> CURRENT APPLICATION NUMBER: US/09/355,793
8 <141> CURRENT FILING DATE: 1999-09-21
9 <150> EARLIER APPLICATION NUMBER: PCT/US98/01780
10 <151> EARLIER FILING DATE: 1998-01-30
11 <160> NUMBER OF SEQ ID NOS: 20
12 <210> SEQ ID NO 1
13 <211> LENGTH: 20
14 <212> TYPE: DNA
15 <213> ORGANISM: artificial sequence
16 <220> FEATURE:
17 <221> NAME/KEY: primer
18 <223> OTHER INFORMATION: Forward primer for kanamycin-resistance (km) gene
19 cassette
20 <400> SEQUENCE: 1
21 tgtagaaaag aggaaggaaa 20
22 <210> SEQ ID NO 2
23 <211> LENGTH: 20
24 <212> TYPE: DNA
25 <213> ORGANISM: artificial sequence
26 <220> FEATURE:
27 <221> NAME/KEY: primer
28 <223> OTHER INFORMATION: Reverse primer for kanamycin-resistance (km) gene
29 cassette
30 <400> SEQUENCE: 2
31 ctaaaacaat tcatccagta 20
32 <210> SEQ ID NO 3
33 <211> LENGTH: 24
34 <212> TYPE: DNA
35 <213> ORGANISM: artificial sequence
36 <220> FEATURE:
37 <221> NAME/KEY: primer
38 <223> OTHER INFORMATION: Forward primer for chloramphenicol-resistance (cm)
39 gene cassette
40 <400> SEQUENCE: 3
41 agtggataga tttatgatag agtg 24
42 <210> SEQ ID NO 4
43 <211> LENGTH: 22
44 <212> TYPE: DNA
```

PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/355,793DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

45 <213> ORGANISM: artificial sequence  
46 <220> FEATURE:  
47 <221> NAME/KEY: primer  
48 <223> OTHER INFORMATION: Reverse primer for chloramphenicol-resistance (cm)  
49 gene cassette  
50 <400> SEQUENCE: 4  
51 tttattttatt cagcaagtct tg 22  
52 <210> SEQ ID NO 5  
53 <211> LENGTH: 20  
54 <212> TYPE: DNA  
55 <213> ORGANISM: artificial sequence  
56 <220> FEATURE:  
57 <221> NAME/KEY: primer  
58 <223> OTHER INFORMATION: Forward primer for middle sapA promoter region  
59 <400> SEQUENCE: 5  
60 catctctaca gcagcaaaag 20  
61 <210> SEQ ID NO 6  
62 <211> LENGTH: 24  
63 <212> TYPE: DNA  
64 <213> ORGANISM: artificial sequence  
65 <220> FEATURE:  
66 <221> NAME/KEY: primer  
67 <223> OTHER INFORMATION: Forward primer for sapA promoter region  
68 <400> SEQUENCE: 6  
69 gcggagataa tggtgtagtt gatg 24  
70 <210> SEQ ID NO 7  
71 <211> LENGTH: 21  
72 <212> TYPE: DNA  
73 <213> ORGANISM: artificial sequence  
74 <220> FEATURE:  
75 <221> NAME/KEY: primer  
76 <223> OTHER INFORMATION: Reverse primer for sapA promoter region  
77 <400> SEQUENCE: 7  
78 aactttaaga tctagcgtac c 21  
79 <210> SEQ ID NO 8  
80 <211> LENGTH: 21  
81 <212> TYPE: DNA  
82 <213> ORGANISM: artificial sequence  
83 <220> FEATURE:  
84 <221> NAME/KEY: primer  
85 <223> OTHER INFORMATION: Forward primer for middle sapA1 promoter region  
86 <400> SEQUENCE: 8  
87 aggtactga tttagacgat a 21  
88 <210> SEQ ID NO 9  
89 <211> LENGTH: 24  
90 <212> TYPE: DNA  
91 <213> ORGANISM: artificial sequence  
92 <220> FEATURE:  
93 <221> NAME/KEY: primer  
94 <223> OTHER INFORMATION: Forward primer for 3'sapA1 promoter region

PAGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/355,793DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

95 <400> SEQUENCE: 9  
96 gctggattta caggagattt aacc 24  
97 <210> SEQ ID NO 10  
98 <211> LENGTH: 27  
99 <212> TYPE: DNA  
100 <213> ORGANISM: artificial sequence  
101 <220> FEATURE:  
102 <221> NAME/KEY: primer  
103 <223> OTHER INFORMATION: Reverse primer #1 for 3'sapA1 promoter region  
104 <400> SEQUENCE: 10  
105 gttactggta tcaataacaa cataagt 27  
106 <210> SEQ ID NO 11  
107 <211> LENGTH: 21  
108 <212> TYPE: DNA  
109 <213> ORGANISM: artificial sequence  
110 <220> FEATURE:  
111 <221> NAME/KEY: primer  
112 <223> OTHER INFORMATION: Reverse primer #2 for 3'sapA1 promoter region  
113 <400> SEQUENCE: 11  
114 ctacgtaatc atactgctac c 21  
115 <210> SEQ ID NO 12  
116 <211> LENGTH: 15  
117 <212> TYPE: DNA  
118 <213> ORGANISM: Campylobacter fetus  
119 <220> FEATURE:  
120 <223> OTHER INFORMATION: Palindromic sequence of putative recombinase  
121 recognition site present in the 5' conserved  
122 region of S-layer protein gene cassette  
123 <400> SEQUENCE: 12  
124 ttaaggaatc cttaa 15  
125 <210> SEQ ID NO 13  
126 <211> LENGTH: 8  
127 <212> TYPE: PRT  
128 <213> ORGANISM: Campylobacter fetus  
129 <220> FEATURE:  
130 <222> LOCATION: 365..377  
131 <223> OTHER INFORMATION: Amino acid sequence motif of ATP/GTP binding site of  
132 SapD protein  
133 <400> SEQUENCE: 13  
134 Gly Pro Ser Ala Ala Gly Lys Ser  
135 5  
136 <210> SEQ ID NO 14  
137 <211> LENGTH: 12  
138 <212> TYPE: PRT  
139 <213> ORGANISM: Campylobacter fetus  
140 <220> FEATURE:  
141 <222> LOCATION: 468..479  
142 <223> OTHER INFORMATION: Amino acid sequence motif of peptide that is a  
143 signature sequence for ABC transporters found in  
144 SapD protein

PAGE: 4

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/355,793DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

145 <400> SEQUENCE: 14  
146 Lys Ser Gly Gly Gln Arg Gln Arg Val Ala Leu Ala  
147 5 10  
148 <210> SEQ ID NO 15  
149 <211> LENGTH: 5  
150 <212> TYPE: PRT  
151 <213> ORGANISM: Campylobacter fetus  
152 <220> FEATURE:  
153 <223> OTHER INFORMATION: Amino acid sequence of conserved peptide found in  
154 SapA, SapA1, and SapB protein C-termini; Xaa = Thr  
155 or Gly at position #5  
W-->OK 156 <400> SEQUENCE: 15  
157 Gly Asp Gly Ser Xaa  
158 5  
159 <210> SEQ ID NO 16  
160 <211> LENGTH: 5  
161 <212> TYPE: PRT  
162 <213> ORGANISM: Campylobacter fetus  
163 <220> FEATURE:  
164 <223> OTHER INFORMATION: Amino acid sequence of conserved peptide found in  
165 SapA2 protein C-terminus  
166 <400> SEQUENCE: 16  
167 Ser Lys Gly Ser Thr  
168 5  
169 <210> SEQ ID NO 17  
170 <211> LENGTH: 8  
171 <212> TYPE: PRT  
172 <213> ORGANISM: Campylobacter fetus  
173 <220> FEATURE:  
174 <223> OTHER INFORMATION: Amino acid sequence of conserved peptide found in  
175 SapA, SapA1, and SapB protein C-termini; Xaa = unknown  
176 at position #2; Xaa = Val or Ile at position #7  
W-->OK 177 <400> SEQUENCE: 17  
178 Gly Xaa Thr Tyr Val Val Xaa Asp  
179 5  
180 <210> SEQ ID NO 18  
181 <211> LENGTH: 8  
182 <212> TYPE: PRT  
183 <213> ORGANISM: Campylobacter fetus  
184 <220> FEATURE:  
185 <223> OTHER INFORMATION: Amino acid sequence of conserved peptide found in  
186 SapA2 protein C-terminus; Xaa = unknown at position #2  
W-->OK 187 <400> SEQUENCE: 18  
188 Gly Xaa Thr Tyr Val Val Asp Ala  
189 5  
190 <210> SEQ ID NO 19  
191 <211> LENGTH: 4  
192 <212> TYPE: PRT  
193 <213> ORGANISM: unknown  
194 <220> FEATURE:

PAGE: 5

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/355,793DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

195 <223> OTHER INFORMATION: Amino acid sequence of motif implicated in protease  
196 secretion  
197 <400> SEQUENCE: 19  
198 Asp Val Ile Val  
199 1  
200 <210> SEQ ID NO 20  
201 <211> LENGTH: 5  
202 <212> TYPE: PRT  
203 <213> ORGANISM: Campylobacter fetus  
204 <220> FEATURE:  
205 <223> OTHER INFORMATION: Amino acid sequence similar to protease secretion  
206 motif found in SapA and SapB protein C-termini  
207 <400> SEQUENCE: 20  
208 Asp Gly Ser Val Ile  
209 5

PAGE: 6

VERIFICATION SUMMARY  
PATENT APPLICATION US/09/355,793

DATE: 01/05/2000  
TIME: 14:07:36

Input Set: I355793.RAW

Line ? Error/Warning

Original Text

157 W "N" or "Xaa" used: Feature required

Gly Asp Gly Ser Xaa

178 W "N" or "Xaa" used: Feature required

Gly Xaa Thr Tyr Val Val Xaa Asp

188 W "N" or "Xaa" used: Feature required

Gly Xaa Thr Tyr Val Val Asp Ala